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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/714,565

11/17/2003

Simon Charles Watt

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ARLINGTON, VA 22203

EXAMINER

SHAN, APRIL YING

ART UNIT

PAPER NUMBER

2135

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/29/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/714,565

Applicant(s)

WATT ET AL.

Examiner

April Y. Shan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003 and 30 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-21 have been examined.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 0226908.2 of the United Kingdom, filed on 18 November 2002.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Please rewrite the abstract.

4. The abstract is objected to because [Figure 18] should not be appeared on line 21 of the abstract. Please remove.
5. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use, especially with the bolded item (h), Brief Description of the several views of the drawings.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in

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upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).**
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).

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- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.
- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where

elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Claim Objections

6. Claims 2-10 are objected to because of the following informalities:

- a. As per claims 2-10, "Apparatus as claimed..." should be "The apparatus as claimed...";

Appropriate corrections are required.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 11-21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 11-20 are directed to a method of processing data. The examiner respectfully asserts that the claimed subject matter does not fall within the statutory classes listed in 35 USC 101. The claimed steps do not result in a tangible result. Claims 11-20 are rejected as being directed to an abstract idea (i.e., producing non-tangible result) [tangible requirement does require that the claim must recite more than a 101 judicial exception, in that the process must set forth a practical application of that 101 judicial exception to produce a real-world result, Benson, 409 U.S. at 71-72, 175 USPQ at 676-77).

With respect to **claim 21**, "a computer program product having a computer program" is recited. The examiner respectfully asserts that the claimed subject matter does not fall within the statutory classes listed in 35 USC 101. A computer program product having a computer program is software, per se to one of ordinary skill in the art. There is no element positively recited as part of the computer program product. Applicant's specification provides no explicit and deliberate definition on any element positively recited as part of the computer program product, and it appears that such would reasonably be interpreted as representative of the software which controls a data

processing apparatus in accordance with the method of claim 11. Additionally, the claimed computer program does not result in a tangible result. Claim 21 is rejected as being directed to an abstract idea (i.e., producing non-tangible result) [tangible requirement does require that the claim must recite more than a 101 judicial exception, in that the process must set forth a practical application of that 101 judicial exception to produce a real-world result, Benson, 409 U.S. at 71-72, 175 USPQ at 676-77).

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-2, 4-12 and 14-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Christie et al. (U.S. Patent No. 7,165,135).

As per **claims 1 and 11**, Christie et al. discloses an apparatus/method for processing data, comprising:

a processor ("a secure execution mode-capable processor" – e.g. col. 4, lines 30-31) operable in a plurality of modes ("the SEM-capable processor operating in a secure user mode and a secure kernel mode in addition to the normal user mode and normal kernel mode" – e.g. col. 4, lines 13-15 and "...two modes within a normal execution

mode or protection domain: Normal Kernel Mode and Normal User Mode.." – e.g. col. 4, lines 32-37) and a plurality of domains ("Normal User Domain 1010, Normal Kernel Domain 1020, Secure User Domain 1030 and Secure Kernel Domain 1040" – e.g. fig. 1) said plurality of domains comprising a secure domain and a non-secure domain ("... secure execution mode refers to any mode of processor execution during which SEM is enabled... non-secure execution mode refers to any mode of processor execution during which SEM is disabled" – e.g. col. 4, lines 45-51) said plurality of modes including:

at least one secure mode being a mode in said secure domain ("... SK domain 1040, SEM may allow Security Kernel 1021 full access to all platform resources and in addition may give exclusive control of those resources to Security Kernel 1021. The SK domain 1010 may be characterized by a processor running in Kernel mode (i.e. CPL =0) and also in TX mode, which may also be referred to as a secure kernel mode" – e.g. col. 5, lines 23-29); and

at least one non-secure mode being a mode in said non-secure domain ("NU 1010 domain may be characterized by a processor running in normal user mode (i.e. CPL =3) and not in trusted execution (TX) mode...." – e.g. col. 4, lines 52-64);

wherein

when said processor is executing a program in a secure mode said program has access to secure data which is not accessible when said processor is operating in a non-secure mode ("In the SK domain 1040, SEM may allow Security Kernel 1021 full access to all platform resources and in addition may give exclusive control of those resources to

Security Kernel 1021..." – e.g. col. 5, lines 23-29 and "The NU 1010 domain may be characterized by a processor running in normal user mode (i.e. CPL =3) and not in trusted execution (TX) mode... Under SEM, such applications are however prevented from accessing the memory of applications residing in the SU domain 1030, or the memory containing Security Kernel 1021 in the SK domain 1040..." – e.g. col. 4, lines 52-64);

said processor is responsive to one or more exception conditions for triggering exception processing (e.g. col. 9, lines 24 - 43); and said processor being responsive to one or more parameters specifying which of said exceptions should be handled by a secure mode exception handler executing in a secure mode and which of said exceptions should be handled by an exception handler executing in a mode within a current one of said secure domain and said non-secure domain when that exception occurs (e.g. abstract, col. 9, lines 44-61, col. 10, line 31 – col. 11, line 20 and col. 11, lines 40-47).

As per **claims 2 and 12**, Christie et al. discloses an apparatus/method as applied above in claims 1 and 11. Christie et al. further discloses wherein at least one of said parameters is stored in an exception trap mask register (e.g. col. 10, lines 43-46).

As per **claims 4 and 14**, Christie et al. discloses an apparatus/method as applied above in claims 2 and 12. Christie et al. further discloses comprising a configuration controlling coprocessor associated with said processor (e.g. col. 6, line 55

– col. 7, line 61) and wherein said exception trap mask register is a register within said configuration controlling coprocessor (e.g. col. 6, line 55 – col. 7, line 61).

As per **claims 5 and 15**, Christie et al. discloses an apparatus/method as applied above in claims 1 and 11. Christie et al. further discloses wherein at least one of said parameters is a signal value provided at a hardware input to said processor (e.g. col. 10, lines 14-19).

As per **claims 6 and 16**, Christie et al. discloses an apparatus/method as applied above in claims 1 and 11. Christie et al. further discloses wherein said secure exception handler is part of a secure operating system operable in said secure mode (e.g. col. 8, lines 33-56 and col. 9, lines 24-43).

As per **claims 7 and 17**, Christie et al. discloses an apparatus/method as applied above in claims 1 and 11. Christie et al. further discloses wherein said non-secure exception handler is part of a non-secure operating system operable in said non-secure mode (e.g. e.g. col. 8, lines 33-56 and col. 10, lines 47-57).

As per **claims 8 and 18**, Christie et al. discloses an apparatus/method as applied above in claims 1 and 11. Christie et al. further discloses wherein said processor is also operable in a monitor mode and any switching between a secure mode and a non-secure mode required for handling of an exception as specified by said parameters

takes place via said monitor mode, said processor being operable at least partially in said monitor mode to execute a monitor program to manage switching between said secure mode and said non-secure mode (e.g. col. 5, lines 30-51).

As per **claims 9 and 19**, Christie et al. discloses an apparatus/method as applied above in claims 8 and 18. Christie et al. further discloses wherein said monitor program may change said parameters to determine where an exception should be handled (e.g. col. 10, lines 31- 46).

As per **claims 10 and 20**, Christie et al. discloses an apparatus/method as applied above in claims 8 and 18. Christie et al. further discloses wherein said processor includes a register bank (e.g. col. 7, lines 59-61) and said monitor program is operable to flush at least a portion of said register bank shared between said secure mode and said non-secure mode when switching from said secure mode to said non-secure mode such that no secure data held within said register bank may pass from said secure mode to said non-secure mode other than as permitted by said monitor program (e.g. col. 7, lines 31-61, col. 9, lines 14-16 and col. 11, lines 35-37).

As per **claim 21**, Christie et al. discloses the claimed method as applied above in claim 11. Therefore, Christie et al. discloses the claimed computer program product having a computer program for carrying out the method to control a data processing apparatus.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christie et al (U.S. Patent No. 7,165,135).

As per **claims 3 and 13**, Christie et al. discloses an apparatus/method as applied above in claims 2 and 12.

Christie et al. further disclosed in col. 7, lines 31-43, "System memory 110 is configured to store program instructions and data that is frequently used by SEM processor 100....In addition, system memory 110 may be partitioned into a trusted portion and an untrusted portion. The security kernel resides in the trusted portion of system memory 110." To a person with ordinary skill in the art at the time of the invention, an exception trap mask register is memory to hold data item.

At the time of the invention it would have been obvious to a person of ordinary skill in the art that said exception trap mask register is writable when said processor is in a secure mode (trusted portion and have security kernel resides on disclosed by Christie et al.) and said exception trap mask register is non-writable when said processor is in a non-secure mode (untrusted portion disclosed by Christie et al.).

The motivation of doing so would have been "...desirable to improve security and thereby possibly make x86 architecture system less vulnerable to such access", as taught by Christie et al. (col. 2, lines 47-67)

Double Patenting

16. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent

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and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

17. Claims 1, 5-8, 11, 15-18 and 21 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-11 of U.S. Patent No. 7,117,284. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1, 5-8, 11, 15-18 and 21 encompass the same subject matter as claims 1-11 the U.S. Patent No. 7,117,284.

Claim 1 recites Apparatus for processing data, said apparatus comprising: a processor operable in a plurality of modes and a plurality of domains, said plurality of domains comprising a secure domain and a non-secure domain, said plurality of modes

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including: at least one secure mode being a mode in said secure domain; and at least one non-secure mode being a mode in said non-secure domain; wherein when said processor is executing a program in a secure mode said program has access to secure data which is not accessible when said processor is operating in a non-secure mode; said processor is responsive to one or more exception conditions for triggering exception processing; and said processor being responsive to one or more parameters specifying which of said exceptions should be handled by a secure mode exception handler executing in a secure mode and which of said exceptions should be handled by an exception handler executing in a mode within a current one of said secure domain and said non-secure domain when that exception occurs (claim 1 of the U.S. patent 7,117,284)

Claim 5 recites Apparatus as claimed in claim 1, wherein at least one of said parameters is a signal value provided at a hardware input to said processor (claim 5 of the U.S. Patent 7,117,284)

Claims 6-7 recite Apparatus as claimed in claim 1, wherein said secure exception handler is part of a secure operating system operable in said secure mode and wherein said non-secure exception handler is part of a non-secure operating system operable in said non-secure mode (claim 2 of the U.S. Patent 7,117,284)

Claim 8 recites Apparatus as claimed in claim 1, wherein said processor is also operable in a monitor mode and any switching between a secure mode and a non-secure mode required for handling of an exception as specified by said parameters takes place via said monitor mode, said processor being operable at least partially in

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said monitor mode to execute a monitor program to manage switching between said secure mode and said non-secure mode (claims 3 and 4 of the U.S. Patent 7,117,284)

Claim 11 recites A method of processing data, said method comprising the steps of: executing a program with a processor operable in a plurality of modes and a plurality of domains, said plurality of domains comprising a secure domain or a non-secure domain, said plurality of modes including: at least one secure mode being a mode in said secure domain; and at least one non-secure mode being a mode in said non-secure domain; wherein when said processor is executing a program in a secure mode said program has access to secure data which is not accessible when said processor is operating in a non-secure mode; in response to one or more exception conditions triggering exception processing using an exception handler; wherein said processor selects an exception handler in response to one or more parameters specifying which of said exceptions should be handled by a secure mode exception handler executing in a secure mode and which of said exceptions should be handled by an exception handler executing in a mode within a current one of said secure domain and said non-secure domain when that exception occurs (claim 6 of the U.S. Patent 7,117,284)

Claim 15 recites a method as claimed in claim 11, wherein at least one of said parameters is a signal value provided at a hardware input to said processor (claim 10 of the U.S. Patent 7,117,284).

Claims 16 and 17 recite a method as claimed in claim 11, wherein said secure exception handler is part of a secure operating system operable in said secure mode

and wherein said non-secure exception handler is part of a non-secure operating system operable in said non-secure mode (claim 7 of the U.S. Patent 7,117,284)

Claim 18 recites A method as claimed in claim 11, wherein said processor is also operable in a monitor mode and any switching between a secure mode and a non-secure mode required for handling of an exception as specified by said parameters takes place via said monitor mode, said processor being operable at least partially in said monitor mode to execute a monitor program to manage switching between said secure mode and said non-secure mode (claims 8 and 9 of the U.S. Patent 7,117,284).

Claim 21 recites a computer program product having a computer program operable to control a data processing apparatus in accordance with the method of claim 11 (claim 11 of the U.S. Patent 7,117,284)

18. Examiner also requests the Applicant to check co-pending applications 10/714,519 (U.S. Pub. No. 2004/0158736) and 10/714,563 (U.S. Pub. No. 2004/0158727) for provisional obviousness-type double patenting rejections.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. (See PTO-892).

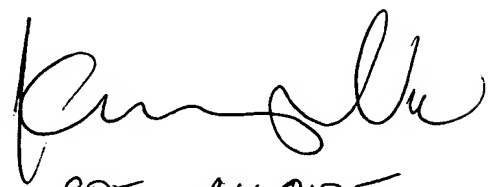
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to April Y. Shan whose telephone number is (571) 270-1014. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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